```
(FILE 'USPAT' ENTERED AT 12:14:42 ON 21 MAY 1999)
L1
             145 S DR5 OR (DEATH(2A) RECEPTOR(W)5)
L2
              35 S L1 AND RECEPTOR?
L3
               0 S (DEATH (2A) RECEPTOR (W) 5)
L4
               0 S DR5 AND TRAIL
L5
               1 S DR5 AND FAS
              E NI, JI/IN
11 S E4 OR E5
L6
                 E GENTZ, R/IN
L7
              11 S E4 OR E5
                 E ROSEN, CRAIG/IN
              31 S E4
L8
L9
              1 S E3
L10
              47 S L6 OR L7 OR L8 OR L9
L11
              1 S (FAS OR TRAIL) AND L10
=> d
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5,874,240, Feb. 23, 1999, Human 4-1BB receptor splicing variant;
 Jian Ni, et al., 435/69.1, 252.3, 254.11, 320.1, 325; 530/350, 395;
 536/23.1, 23.5 [IMAGE AVAILABLE]

(FILE 'HOME' ENTERED AT 12:24:12 ON 21 MAY 1999)

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FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS, INPADOC' ENTERED AT 12:24:45 ON
21
     MAY 1999
L1
             80 S DR5 AND (TRAIL OR FAS)
L2
             45 S DEATH (3W) RECEPTOR (W) 5
L3
             37 S L2 AND (FAS OR TRAIL)
             45 S L2 OR L3
L4
            101 S L1 OR L4
L5
             31 S L5 NOT PY>1997
L6
L7
             14 DUP REM L6 (17 DUPLICATES REMOVED)
                E NI J/AU
rs
            236 S E3
L9
            347 S E41
                E GENTZ R/IN
                E GENTZ R/AU
L10
              1 S E7
L11
            382 S E4-E8
            267 S L8 OR L9 AND (TRAIL OR (DEATH(3W)RECEPTOR?))
L12
L13
            266 S L12 NOT L7
L14
            48 S (L8 OR L9) AND (TRAIL OR (DEATH(3W) RECEPTOR?))
L15
             47 S L14 NOT L7
L16
             20 DUP REM L15 (27 DUPLICATES REMOVED)
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L7 ANSWER 4 OF 14 MEDLINE DUPLICATE 1
TI Identification and molecular cloning of two novel receptors for the cytotoxic ligand TRAIL.

AU MacFarlane M; Ahmad M; Srinivasula S M; Fernandes-Alnemri T; Cohen G M; Alnemri E S

- SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1997 Oct 10) 272 (41) 25417-20. Journal code: HIV. ISSN: 0021-9258.
- L7 ANSWER 5 OF 14 MEDLINE
- TI TRAIL-R2: a novel apoptosis-mediating receptor for TRAIL
- AU Walczak H; Degli-Esposti M A; Johnson R S; Smolak P J; Waugh J Y; Boiani N; Timour M S; Gerhart M J; Schooley K A; Smith C A; Goodwin R G; Rauch C T
- SO EMBO JOURNAL, (1997 Sep 1) 16 (17) 5386-97. Journal code: EMB. ISSN: 0261-4189.
- L7 ANSWER 7 OF 14 MEDLINE
 TI TRAIL recentors 1 (DR4) and 2 (DR4)
- TI TRAIL receptors 1 (DR4) and 2 (DR5) signal FADD-dependent apoptosis and activate NF-kappaB.
- AU Schneider P; Thome M; Burns K; Bodmer J L; Hofmann K; Kataoka T; Holler N;
- Tschopp J
 O IMMUNITY, (1997 Dec
- SO IMMUNITY, (1997 Dec) 7 (6) 831-6. Journal code: CCF. ISSN: 1074-7613.
- L7 ANSWER 8 OF 14 MEDLINE DUPLICATE 4
- TI Death receptor 5, a new member of the TNFR family, and DR4 induce FADD-dependent apoptosis and activate the NF-kappaB pathway.
- AU Chaudhary P M; Eby M; Jasmin A; Bookwalter A; Murray J; Hood L SO IMMUNITY, (1997 Dec) 7 (6) 821-30.

 Journal code: CCF. ISSN: 1074-7613.
- L7 ANSWER 14 OF 14 MEDLINE
- TI Characterization of two receptors for TRAIL.
- AU Schneider P; Bodmer J L; Thome M; Hofmann K; Holler N; Tschopp J
- SO FEBS LETTERS, (1997 Oct 27) 416 (3) 329-34.

 Journal code: EUH. ISSN: 0014-5793.

L7 ANSWER 1 OF 14 MEDLINE On the TRAIL from p53 to apoptosis? [news]. TIΑU SO NATURE GENETICS, (1997 Oct) 17 (2) 130-1. Journal code: BRO. ISSN: 1061-4036. T.7 ANSWER 2 OF 14 MEDLINE ΤI KILLER/DR5 is a DNA damage-inducible p53-regulated death receptor gene [letter]. Wu G S; Burns T F; McDonald E R 3rd; Jiang W; Meng R; Krantz I D; Kao G; ΑIJ Gan D D; Zhou J Y; Muschel R; Hamilton S R; Spinner N B; Markowitz S; Wu G; el-Deiry W S NATURE GENETICS, (1997 Oct) 17 (2) 141-3. SO Journal code: BRO. ISSN: 1061-4036. L7 ANSWER 3 OF 14 MEDLINE TTHow TRAIL kills cancer cells, but not normal cells [news; comment). ΑU Gura T SO SCIENCE, (1997 Aug 8) 277 (5327) 768. Journal code: UJ7. ISSN: 0036-8075. L7 ANSWER 6 OF 14 MEDLINE DUPLICATE 2 A novel receptor for Apo2L/TRAIL contains a truncated death TΤ Marsters S A; Sheridan J P; Pitti R M; Huang A; Skubatch M; Baldwin D; ΑU Yuan J; Gurney A; Goddard A D; Godowski P; Ashkenazi A SO CURRENT BIOLOGY, (1997 Dec 1) 7 (12) 1003-6. Journal code: B44. ISSN: 0960-9822. L7 ANSWER 9 OF 14 MEDLINE DUPLICATE 5 Control of TRAIL-induced apoptosis by a family of signaling and ΤI decoy receptors [see comments]. Sheridan J P; Marsters S A; Pitti R M; Gurney A; Skubatch M; Baldwin D; ΑU Ramakrishnan L; Gray C L; Baker K; Wood W I; Goddard A D; Godowski P; Ashkenazi A SCIENCE, (1997 Aug 8) 277 (5327) 818-21. SO Journal code: UJ7. ISSN: 0036-8075. L7 ANSWER 10 OF 14 MEDLINE DUPLICATE 6 An antagonist decoy receptor and a death domain-containing receptor for TITRAIL [see comments]. ΑU Pan G; Ni J; Wei Y F; Yu G; Gentz R; Dixit V M SCIENCE, (1997 Aug 8) 277 (5327) 815-8. SO Journal code: UJ7. ISSN: 0036-8075. T.7 ANSWER 11 OF 14 CAPLUS COPYRIGHT 1999 ACS ΤТ Bcr-abl translocation can occur during the induction of multidrug resistance and confers apoptosis resistance on myeloid leukemic cell lines ΑU Belloc, Francis; Cotteret, Sophie; Labroille, Gilles; Schmit, Valerie; Jaloustre, Claudine; Dumain, Patrice; Durrieu, Francoise; Reiffers, Josy; Boisseau, Michel R.; Bernard, Philippe; Lacombe, Francis SO Cell Death Differ. (1997), 4(8), 806-814 CODEN: CDDIEK; ISSN: 1350-9047 ANSWER 12 OF 14 MEDLINE ΤI Cell death: TRAIL and its receptors.

AU Golstein P
SO CURRENT BIOLOGY, Journal code: B44. ISSN: 0960-9822.

L7 ANSWER 13 OF 14 MEDLINE

TI TRICK2, a new alternatively spliced receptor that transduces the cytotoxic

signal from TRAIL.

AU Screaton G R; Mongkolsapaya J; Xu X N; Cowper A E; McMichael A J; Bell J

SO CURRENT BIOLOGY, (1997 Sep 1) 7 (9) 693-6. Journal code: B44. ISSN: 0960-9822.

L16 ANSWER 7 OF 20 CAPLUS COPYRIGHT 1999 ACS The present invention relates to a novel human gene encoding a polypeptide which is a member of the TNF receptor family, and has now been found to bind TRAIL (TNF-related apoptosis-inducing ligand). More specifically, an isolated nucleic acid mol. is provided encoding a human polypeptide named tumor necrosis factor receptor-5, sometimes referred to as "TNFR-5" or "TR5", and now referred to hereinafter as "TRAIL receptor without intracellular domain" or "TRID". The human TRID clone contains an open reading frame encoding a polypeptide of 259 amino acid residues, with a leader sequence of 26 amino acids. TRID has an extracellular TRAIL-binding domain (residues from about 1 to about 214) and a transmembrane domain but lacks a putative intracellular signaling domain. TRID protects cells from TRAIL-induced apoptosis. TRID polypeptides are also provided, as are vectors, host cells, and recombinant methods for producing the same. The invention further relates to screening methods for identifying agonists or antagonists of TRAIL polypeptide activity. Also provided are diagnostic and therapeutic methods utilizing such compns. => d 7 ti, au, so ANSWER 7 OF 20 CAPLUS COPYRIGHT 1999 ACS Cloning and cDNA sequence of human tumor necrosis factor receptor 5 or TRID (TRAIL receptor without intracellular domain) Wei, Ying-fei; Ni, Jian; Ebner, Reinhard; Yu, Guo-liang; Ruben, IN Steven M.; Gentz, Reiner L.; Feng, Ping PCT Int. Appl., 91 pp. SO CODEN: PIXXD2 => d 7ANSWER 7 OF 20 CAPLUS COPYRIGHT 1999 ACS L16 1998:493681 CAPLUS ΑN DN 129:118787 Cloning and cDNA sequence of human tumor necrosis factor receptor 5 or ΤI TRID (TRAIL receptor without intracellular domain) Wei, Ying-fei; Ni, Jian; Ebner, Reinhard; Yu, Guo-liang; Ruben, ΤN Steven M.; Gentz, Reiner L.; Feng, Ping Human Genome Sciences, Inc., USA; Wei, Ying-Fei; Ni, Jian; Ebner, PAReinhard; Yu, Guo-Liang; Ruben, Steven M.; Gentz, Reiner L.; Feng, Ping SO PCT Int. Appl., 91 pp. CODEN: PIXXD2 DTPatent LA English FAN.CNT 2 PATENT NO. KIND DATE APPLICATION NO. DATE --------- -----PIWO 9830693 A2 19980716 WO 98-US152 19980113 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, N. AL, AI, AI, AO, AZ, BA, BB, BB, BB, BB, BB, CH, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,

GA, GN, ML, MR, NE, SN, TD, TG

AU 9862386 PRAI US 97-35496 US 97-54885 WO 98-US152 1 1998080 70114 19970807 19980113

19980803 AU 98-62386

19980113

L16 ANSWER 17 OF 20 EMBASE COPYRIGHT 1999 ELSEVIER SCI. B.V.DUPLICATE 8 An antagonist decoy receptor and a death domain-containing receptor for TRAIL. Pan G.; Ni J.; Wei Y.-F.; Yu G.-I.; Gentz R.; Dixit V.M. SO Science, (1997) 277/5327 (815-818). Refs: 20 ISSN: 0036-8075 CODEN: SCIEAS ANSWER 16 OF 20 INPADOC COPYRIGHT 1999 EPO L16 TIDEATH DOMAIN CONTAINING RECEPTORS. YU GUO-LIANG; NI JIAN; DIXIT VISHVA M; GENTZ REINER L; DILLON PATRICK J INS L16 ANSWER 13 OF 20 MEDLINE DUPLICATE 6 TRUNDD, a new member of the TRAIL receptor family that TΙ antagonizes TRAIL signalling. Pan G; Ni J; Yu G; Wei Y F; Dixit V M ΔIJ FEBS LETTERS, (1998 Mar 6) 424 (1-2) 41-5. SO Journal code: EUH. ISSN: 0014-5793. L16 ANSWER 11 OF 20 MEDLINE DUPLICATE 4 Death domain receptors and their role in cell demise. TISingh A; Ni J; Aggarwal B B ΑU JOURNAL OF INTERFERON AND CYTOKINE RESEARCH, (1998 Jul) 18 (7) 439-50. SO Ref: 129 Journal code: CD4. ISSN: 1079-9907. L16 ANSWER 8 OF 20 INPADOC COPYRIGHT 1999 EPO TIDEATH DOMAIN CONTAINING RECEPTOR 5. NI JIAN; GENTZ REINER L; YU GUO-LIANG; SU JEFFREY Y; ROSEN CRAIG A INS => d 8, 4, 2ANSWER 8 OF 20 INPADOC COPYRIGHT 1999 EPO L16 28676468 INPADOC UW 9851 UP 981226 AΝ EW 9851 ED 981226 DEATH DOMAIN CONTAINING RECEPTOR 5. ΤI JIAN NI; REINER L GENTZ; GUO-LIANG YU; JEFFREY Y. SU; CRAIG A ROSEN IN NI JIAN; GENTZ REINER L; YU GUO-LIANG; SU JEFFREY Y; ROSEN CRAIG A INS HUMAN GENOME SCIENCES, INC. PΑ PAS HUMAN GENOME SCIENCES INC DT Patent PIT AUA1 COMP. SPEC. OPEN TO PUB. INSP. ΡI AU 9867635 Al 981012 ΑI AU 98-67635 A 980317 PRAI US 97-40846 P 970317 EWPR 9841 EDPR 981017 US 97-54021 P 970729 EWPR 9841 EDPR 981017 W 980317 WO 98-US5377 EWPR 9851 EDPR 981226 * L16 ANSWER 4 OF 20 CAPLUS COPYRIGHT 1999 ACS DUPLICATE 1 ΑN 1998:640345 CAPLUS DN 129:256017 ΤI Death domain containing receptor 5 and nucleic acids encoding DR5 Ni, Jian; Gentz, Reiner L.; Yu, Guo-liang; Su, Jeffrey Y.; IN Rosen, Craig A. PΑ Human Genome Sciences, Inc., USA SO PCT Int. Appl., 90 pp. CODEN: PIXXD2

DT Patent LA English FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE ----- ----_____ WO 9841629 A2 19980924 WO 9841629 A3 19981029 ΡI WO 98-US5377 19980317 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG Al 19981012 AU 9867635 AU 98-67635 19980317 PRAI US 97-40846 19970317 US 97-54021 19970729 WO 98-US5377 19980317 T.16 ANSWER 2 OF 20 INPADOC COPYRIGHT 1999 EPO ΑN 28943053 INPADOC UW 9911 UP 990327 EW 9908 ED 990306 ΤI DEATH DOMAIN CONTAINING RECEPTORS. YU, GUO-LIANG; NI, JIAN; DIXIT, VISHVA, M.; GENTZ, REINER, L.; DILLON, IN PATRICK, J. YU GUO-LIANG; NI JIAN; DIXIT VISHVA M; GENTZ REINER L; DILLON PATRICK J INS INA PΑ HUMAN GENOME SCIENCES, INC.; THE REGENTS OF THE UNIVERSITY OF MICHIGAN PAS HUMAN GENOME SCIENCES INC; UNIV MICHIGAN PAA LΑ English TLEnglish; French; German DТ Patent EPA1 PUBL. OF APPLICATION WITH SEARCH REPORT PTT PΙ EP 898576 A1 990303 R AT; R BE; R CH; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE; R IT; DS LI; R LU; R MC; R NL; R PT; R SE ΑI EP 96-941942 A 961017 PRAI WO 96-US16849 W 961017 EWPR 9752 EDPR 980103

EWPR 9740 EDPR 971011

US 96-13285 P 960312